



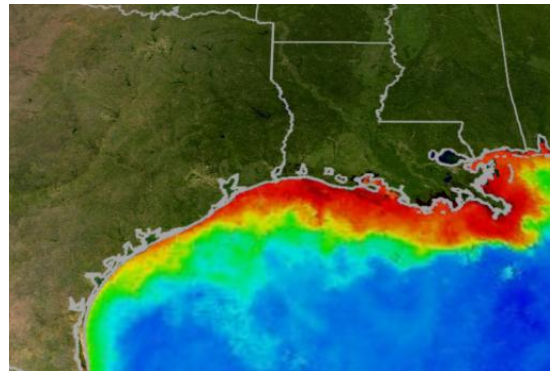
The NOAA Big Data Project



Surface Observations



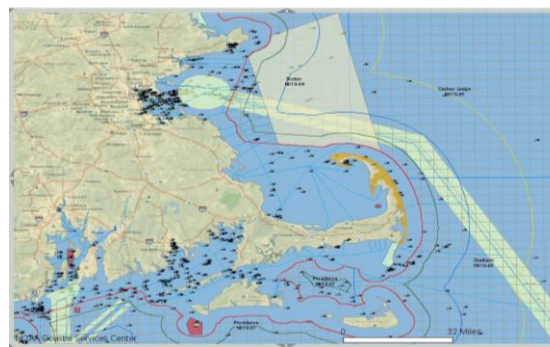
Satellite Imagery



Fisheries Data



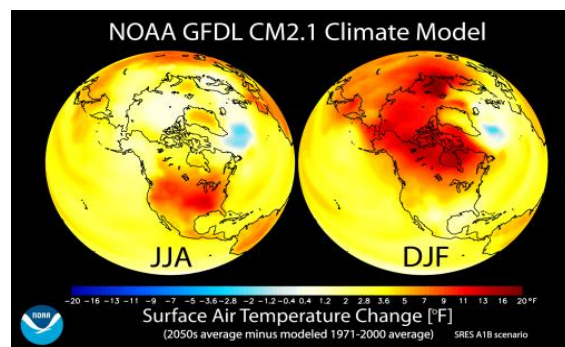
Coastal Mapping



Severe Weather Warnings

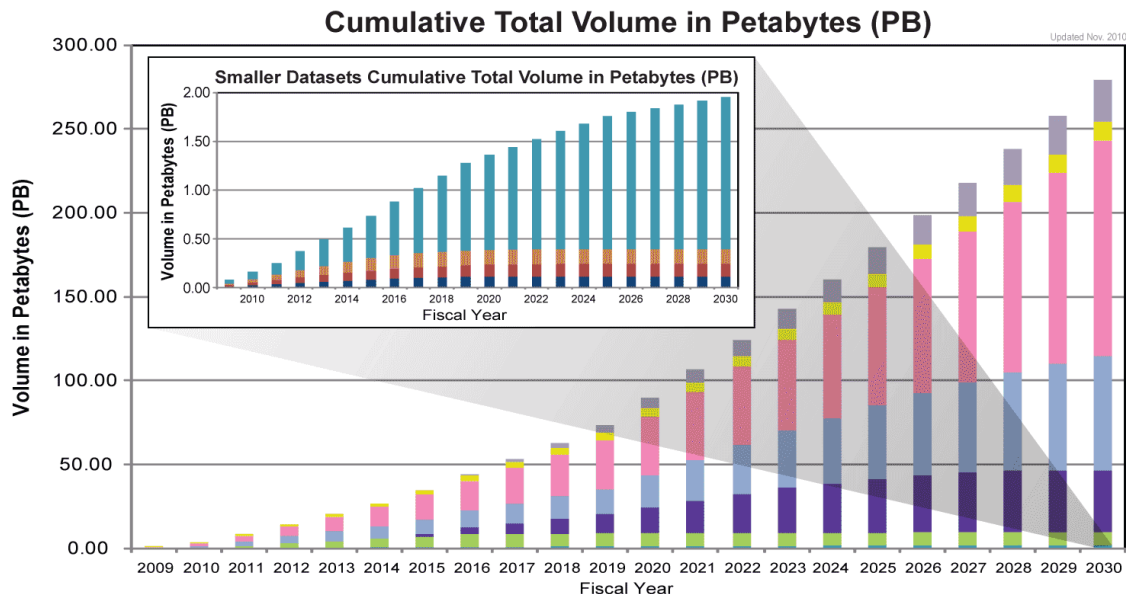


Weather and Climate Models





NOAA BDP: Massive Volume



Large Volume Datasets

Space Based Data

- Joint Polar Satellite System (JPSS)
- NPOESS Preparatory Project (NPP)
- Geostationary Operational Environmental Satellite (GOES-R) Series
- IJPS (Initial Joint Polar System aka EUMETSAT Polar System)

Ground Based Data

- NEXRAD Weather Radar

Model Data

- Climate and Weather

Data Centers

- Other (ground and space based)

Smaller Volume Datasets (inset)

Space Based Data (Historical & Current)

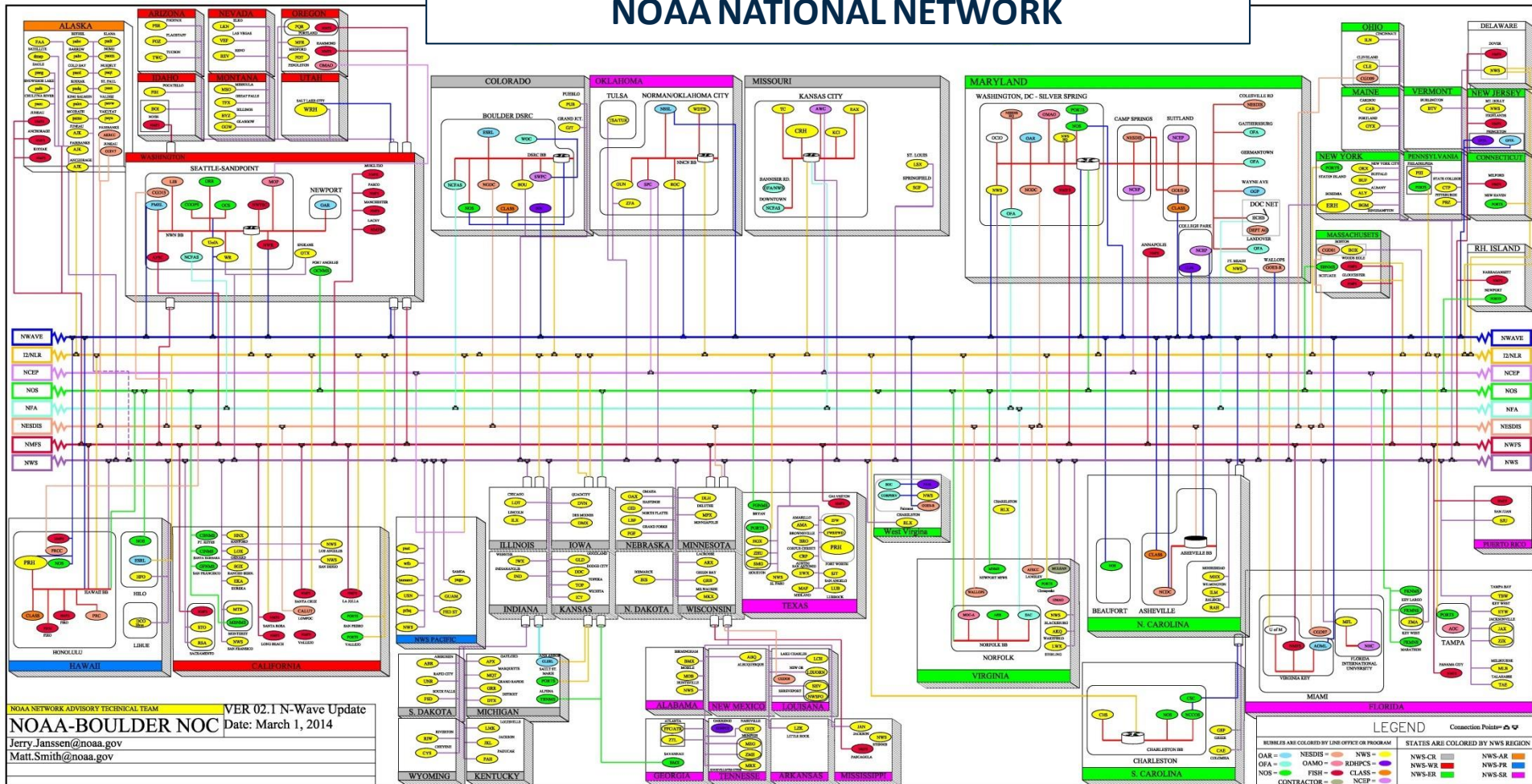
- IJPS (Initial Joint Polar System
aka EUMETSAT Polar System)
- Defense Meteorological
Satellite Program (DMSP)
- Polar-orbiting Operational Environmental
Satellite (POES) Series
- Geostationary Operational
Environmental Satellites (GOES) Series



NOAA's Data Challenge



NOAA NATIONAL NETWORK

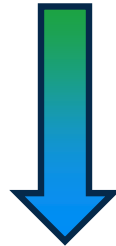




BDP Goals

- **Highly Scalable Open Access Platform**
 - **High Resolution and Low Latency**
 - **Driven by Public Demand**
 - **No net cost to the Government**

So that the



world can....

- **Incorporate our best information into decision process**
 - **Develop better applications, products, and services**
 - **Invent something that we cannot yet envision**



Yes, Let's put our data on the cloud. But how?



February 21, 2014



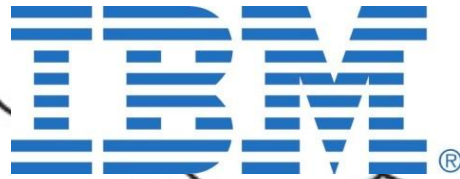
September 26, 2014



October 17, 2014



Our Approach: Data Alliances



Google Cloud Platform



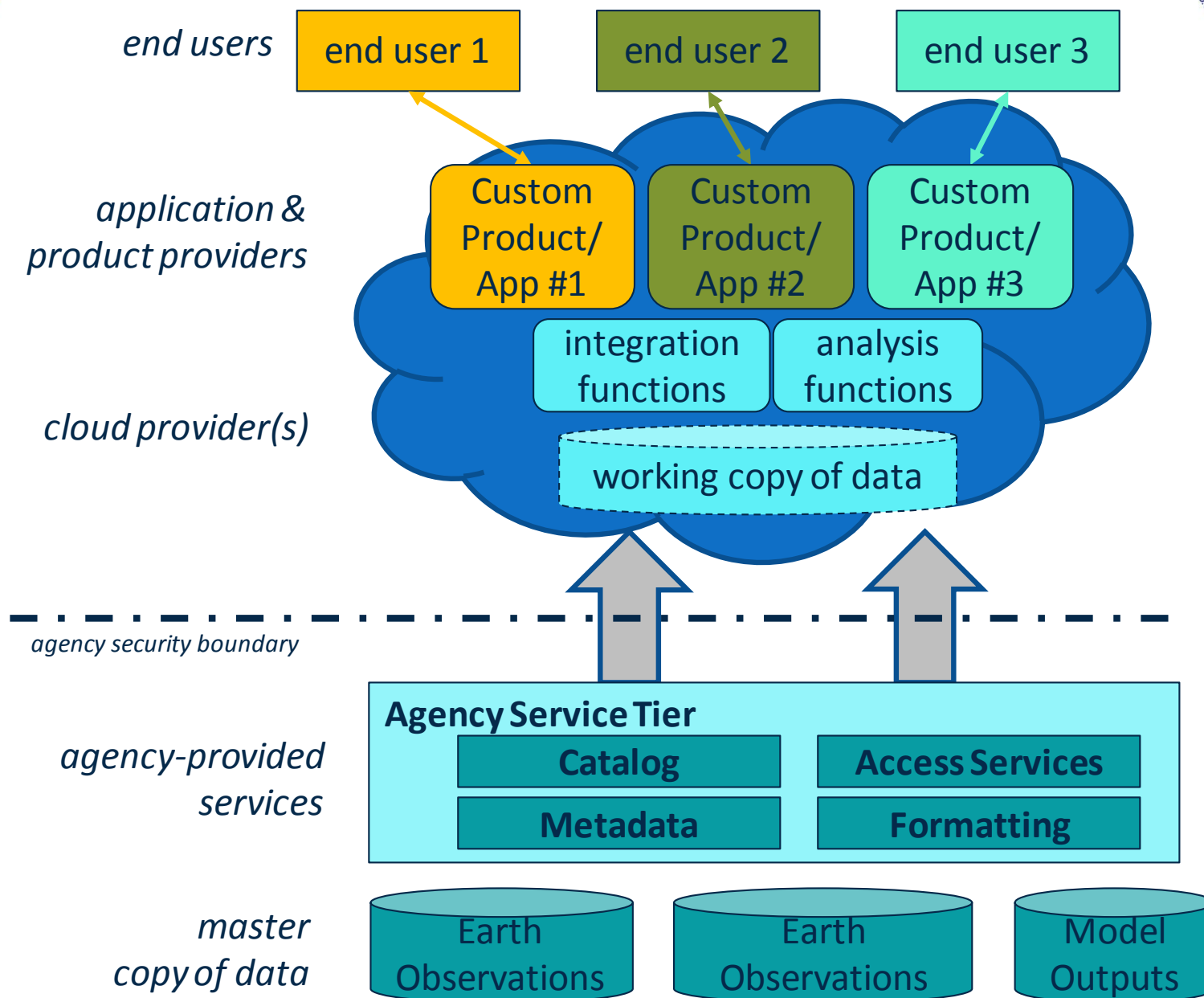
Businesses

Academia

Non-Profits



Early Architectural Concept





An Invitation to Experiment and Innovate....



NOAA



BDP Anchors





And Create!



RUTGERS
UNIVERSITY



NFWF



RAA Reinsurance Association of America



 **AccuWeather**
SUPERIOR ACCURACY™



esri



MAERSK

 **The
Weather
Company**



The collected organizations referenced above represents a speculative ensemble of potential alliance members. Inclusion does not necessarily imply a present relationship with the NOAA Big Data Project.



CRADA: Cooperative Research & Development Agreement



Cooperative Research & Development Agreement

Article 1. INTRODUCTION

This Cooperative Research and Development Agreement (CRADA) between _____, a laboratory of the National Oceanic and Atmospheric Administration (NOAA) and the Collaborator will be effective when signed by the Parties. The research and development project(s) which will be undertaken by each of the Parties in the course of the CRADA is detailed in the Technical Statement of Objectives (SoO) which is attached as part of Appendix A. Acceptances or changes to the CRADA are set forth in Appendix B.

Article 2. DEFINITIONS

As used in this CRADA, the following terms shall have the indicated meanings:

"Background Invention" means any invention of either Party that is neither conceived nor first actually reduced to practice under the CRADA.

"Cooperative Research and Development Agreement" or "CRADA" means this Agreement, entered into between NOAA pursuant to 15 U.S.C. 3710a.

"Invention" means any invention or discovery which is or may be patentable or otherwise protected under Title 35 (35 U.S.C.) or any novel variety of plant which is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).

"Principal Investigator" or "PI" means the person designated respectively by each Party to this CRADA who will be responsible for the scientific and technical conduct of the research.

"Project Team" means all personnel assigned by the Collaborator to conduct the research designated in this Agreement.

"Proprietary Information" means confidential scientific, business, or financial information, including data created under this Agreement solely by the Collaborator at the Collaborator's research facilities, which may embody trade secrets provided by the Collaborator to NOAA in the course of this CRADA, and developed exclusively at private expense, except if such information:

- 2.6.1 was in NOAA's possession before receipt from the Collaborator; or
- 2.6.2 is or becomes a matter of public knowledge through no fault of NOAA; or
- 2.6.3 is received by NOAA from a third party without a duty of confidentiality; or
- 2.6.4 is disclosed by the Collaborator to a third party without a duty of confidentiality on the third party; or

Core Principle #1

Non-exclusive access to NOAA Data

Core Principle #2

Equal access to NOAA data on equal terms



Looking Ahead

